

We claim

1. A process for isomerizing cis-2-pentenenitrile to trans-3-pentenenitrile in the presence of aluminum oxide as a catalyst, wherein the aluminum oxide has a BET surface area of at least 50 m<sup>2</sup>/g.
- 5 2. A process as claimed in claim 1, wherein the aluminum oxide has a BET surface area of at least 70 m<sup>2</sup>/g.
- 10 3. A process as claimed in claim 1, wherein the aluminum oxide has a BET surface area of at most 400 m<sup>2</sup>/g.
4. A process as claimed in any of claims 1 to 3, wherein the isomerization is carried out in the liquid phase.
- 15 5. A process as claimed in any of claims 1 to 4, wherein the reaction is carried out at a temperature in the range between 50°C and 250°C.